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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,644	10/15/2003	Jochen Koetke	GMH/411/US	4993

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ALIX YALE & RISTAS LLP
750 MAIN STREET
SUITE 1400
HARTFORD, CT 06103

EXAMINER	
LAVARIAS, ARNEL C	
ART UNIT	**PAPER NUMBER**
2872	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/685,644	KOETKE, JOCHEN	
	Examiner	Art Unit	
	Arnel C. Lavarias	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/26/06,9/14/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6,8-20 and 22-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6,8-20 and 22-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/14/06 has been entered.

Response to Amendment

2. The amendments to Claims 2-6, 8, 11-14 in the submission dated 9/14/06 are acknowledged and accepted.

3. The cancellation of Claims 1, 21 in the submission dated 9/14/06 is acknowledged and accepted.

4. The addition of Claims 22-33 in the submission dated 9/14/06 is acknowledged and accepted.

5. In view of these amendments above, the objections to the claims in Section 14 of the Office Action dated 5/19/06 are respectfully withdrawn.

Response to Arguments

6. The Applicant's arguments, see in particular Pages 7-8 of the submission, filed 9/14/06, with respect to the rejections of Claims 1-6, 8-21 in Sections 16-24 of the Office Action dated 5/19/06, have been fully considered and are persuasive. The rejections of Claims 1-6, 8-21 in Sections 16-24 of the Office Action dated 5/19/06 have been withdrawn.

7. Claims 2-6, 8-20, 22-33 are now rejected as follows.

Claim Objections

8. Claims 14 and 33 are objected to because of the following informalities: Regarding Claims 14 and 33, the phrase "and/or" appears to be problematic since it is not certain whether the limitation(s) associated with the phrase are part of the claimed invention. For purposes of examination, this limitation has been taken to mean "or". Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 5, 8-13, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kleinburg et al. (U.S. Patent No. 5299053).

Kleinburg et al. discloses an operation microscope (See for example Abstract; Figures 1-6) comprising an illuminating device (See for example 42, 12 in Figures 1-2; Figure 4) illuminating an object plane (See 16, 52 in Figures 1-2, 4) with a light patch, the illuminating device and the light patch defining an illuminating beam path, the illuminating beam path having an optical axis; first and second observation beam paths (See for example paths through 18, 20, 28, 30 in Figures 1-2, 4); a front lens (See for example 14 in Figures 1-2, 4) disposed in the illuminating beam path and the first and second observation beam paths; and a diaphragm (See for example 62, 68 in Figures 1-2, 4) disposed within the illuminating beam path but not within the first and second observation beam paths, the diaphragm defining at least one substantially rectangular slit (See for example Figures 2-5), the diaphragm being rotatable (See 54 in Figures 1-2, 4) about an axis parallel to the optical axis of the illuminating beam path whereby the at least one slit is rotatable from a first orientation within the illuminating beam path to a second orientation within the illuminating beam path, wherein the light patch is movable with a translatory movement component in the object plane. Kleinburg et al. additionally discloses the diaphragm being arranged in a diaphragm support which is movable perpendicular to the optical axis of the illuminating beam path (See for example 66 in Figure 3, whose rotating movement is perpendicular to the illumination beam axis); more than one diaphragm is provided on the diaphragm support (See for example 68 in Figures 4-5); the diaphragm or at least one diaphragm is slit shaped (See for example 66, 68 in

Figures 1-5); the diaphragm is arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See for example Figures 2-4, 6); the diaphragm or at least one diaphragm is circular (See Figures 2-5); the diaphragm has a modifiable slit width size or a modifiable circle diameter size (See 56 in Figures 2-4; 74 in Figure 5); and the diaphragm is arranged on a diaphragm support which is partially transmitting at least in subareas (See for example 68 in Figures 4-5).

11. Claims 23, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Horiguchi et al. (U.S. Patent No. 6943942).

Horiguchi et al. discloses an operation microscope (See for example Abstract; Figure 25) comprising an illuminating device (See for example 61, 70 in Figures 25-29) illuminating an object plane (See 8, 8a in Figure 25) with a light patch, the illuminating device and the light patch defining an illuminating beam path, the illuminating beam path having an optical axis; first and second observation beam paths (See for example 60 in Figure 25; Figure 29); a front lens (See for example 14, 15 in Figure 25) disposed in the illuminating beam path and the first and second observation beam paths; and a diaphragm (See for example 73 in Figure 25) mounted in a diaphragm support disposed within the illuminating beam path but not within the first and second observation beam paths, the diaphragm defining at least one substantially rectangular slit, the diaphragm support being movable perpendicular to the optical axis of the illuminating beam path, wherein the light patch is movable with a translatory movement component in the object plane

(See col. 11, line 35-col. 12, line 46). Horiguchi et al. additionally discloses the diaphragm being slit-shaped (See 73 in Figure 25; col. 11, lines 45-52).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 2-3, 6, 15, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinburg et al. in view of Penney et al. (U.S. Patent No. 5258791), of record.

Kleinburg et al. discloses the invention as set forth above in Claim 22, but does not specifically disclose the diaphragm being movable with a translatory component in the illuminating beam path in two directions perpendicular to the optical axis of the illuminating beam path; and the illuminating device being movable relative to the diaphragm. However, Penney et al. teaches a conventional operation microscope (See for example Figures 1-2, 4-6) with an illumination device (See for example 112 in Figure 4) which is arranged behind a front lens (See for example 114 in Figure 4) and illuminates an object plane (See for example 148 in Figure 4) with a light patch (See Figure 8) and in whose beam path a diaphragm (See for example 132, 134 in Figure 4) is arranged which partially covers the beam path, the diaphragm defining at least one hole disposed in the beam path (See for example 134 in Figure 4) and the beam path has an optical axis, the diaphragm (See 132 in Figure 4) being rotatable about an axis parallel to the optical axis

of the illuminating beam path whereby the at least one pinhole is rotatable from a first orientation with the beam path to a second orientation within the beam path (See specifically Figure 8; col. 18, lines 12-28; It is noted that as the pinhole is rotated, the pinhole specifically changes positional orientation within the cross-section of the beam (See 132, 134 specifically in Figure 6)), wherein the light patch is moved with a translatory movement component in the object plane (See col. 9, line 1-col. 14, line 4; See also Figure 8; col. 18, lines 12-28). Penney et al. additionally teaches the diaphragm being designed for a movement with a translatory component in the beam path perpendicular to the optical axis of the illuminating beam path (See for example 36, 32, 34 in Figure 1; col. 9, line 1-col. 14, line 4); the illuminating device is movable relative to the diaphragm (See for example 22,12 in Figure 1; col. 9, line 1-col. 14, line 4); the diaphragm is arranged in a diaphragm support which is movable perpendicular to the optical axis of the illuminating path (See for example 32 in Figure 1; col. 9, line 1-col. 14, line 4); more than one diaphragm may be provided on the diaphragm support (See for example 132, 134 in Figure 4); the diaphragm or at least one diaphragm is circular (See for example 34 in Figure 1; 134 in Figure 4); the diaphragm is movable in two directions perpendicular to one another and linearly perpendicular to the optical axis of the illuminating beam path (See for example 36 in Figure 1; col. 9, line 1-col. 14, line 4); and the diaphragm is arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See for example 132 in Figure 4). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the diaphragm be movable with a

translatory component in the illuminating beam path in two directions perpendicular to the optical axis of the illuminating beam path; and the illuminating device be movable relative to the diaphragm, as taught by Penney et al., in the microscope of Kleinburg et al., to allow for proper optical alignment of the source and diaphragm in the optical path.

14. Claims 4, 14, 16-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinburg et al. in view of Penney et al.

Kleinburg et al. discloses the invention as set forth above in Claim 22, but does not specifically disclose the light patch being movable by pivoting of a deflection element for the illuminating light, and the diaphragm or deflection element being adjustable by motor. However, Penney et al. additionally discloses (See col. 10, lines 32-57) that the light source, as an alternative to directly moving the light source (See 12 in Figure 1) itself, may be fixed in position, and the light emitted from the source is reflected by a galvanometer mounted mirror whose orientation is controlled by the control system (See 80 in Figure 1), which provides a similar effect to moving the source with an X-Y stage. It is noted that such galvanometer mounted mirrors typically pivot about an axis, and that by moving the beam using such a mirror, the light patch will necessarily move. Further, Penney et al. discloses that the diaphragm position may be adjusted via a system controller (See for example 80 in Figure 1) connected to a position drive system, such as an X-Y stage (See for example 36 in Figure 1). It is well known in the art that such conventional X-Y stages utilize motors to provide the movement needed for the stages. Official notice is taken. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the light patch be movable by pivoting

of a deflection element for the illuminating light, and the diaphragm or deflection element be adjustable by motor, as taught by Penney et al., in the microscope of Kleinburg et al., to 1) allow for extremely fast, repetitive, and repeatable movement and scanning of the light beam from the light source, and 2) provide fast, automated movement of the stage without user intervention.

15. Claims 24, 26-28, 30, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Penney et al.

Horiguchi et al. discloses the invention as set forth above in Claim 23, but does not specifically disclose one or more diaphragms being circular and being movable with a translatory component in the illuminating beam path in two directions perpendicular to the optical axis of the illuminating beam path; the illuminating device being movable relative to the one or more diaphragms; the diaphragm support being partially transmitting at least in subareas; and the diaphragm support being rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path. However, Penney et al. teaches a conventional operation microscope (See for example Figures 1-2, 4-6) with an illumination device (See for example 112 in Figure 4) which is arranged behind a front lens (See for example 114 in Figure 4) and illuminates an object plane (See for example 148 in Figure 4) with a light patch (See Figure 8) and in whose beam path a diaphragm (See for example 132, 134 in Figure 4) is arranged which partially covers the beam path, the diaphragm defining at least one hole disposed in the beam path (See for example 134 in Figure 4) and the beam path has an optical axis, the diaphragm (See 132 in Figure 4) being rotatable about an axis parallel to the optical axis of the illuminating

beam path whereby the at least one pinhole is rotatable from a first orientation with the beam path to a second orientation within the beam path (See specifically Figure 8; col. 18, lines 12-28; It is noted that as the pinhole is rotated, the pinhole specifically changes positional orientation within the cross-section of the beam (See 132, 134 specifically in Figure 6)), wherein the light patch is moved with a translatory movement component in the object plane (See col. 9, line 1-col. 14, line 4; See also Figure 8; col. 18, lines 12-28). Penney et al. additionally teaches the diaphragm being designed for a movement with a translatory component in the beam path perpendicular to the optical axis of the illuminating beam path (See for example 36, 32, 34 in Figure 1; col. 9, line 1-col. 14, line 4); the illuminating device is movable relative to the diaphragm (See for example 22,12 in Figure 1; col. 9, line 1-col. 14, line 4); the diaphragm is arranged in a diaphragm support which is movable perpendicular to the optical axis of the illuminating path (See for example 32 in Figure 1; col. 9, line 1-col. 14, line 4); more than one diaphragm may be provided on the diaphragm support (See for example 132, 134 in Figure 4); the diaphragm or at least one diaphragm is circular (See for example 34 in Figure 1; 134 in Figure 4); the diaphragm is movable in two directions perpendicular to one another and linearly perpendicular to the optical axis of the illuminating beam path (See for example 36 in Figure 1; col. 9, line 1-col. 14, line 4); the diaphragm support being partially transmitting at least in subareas (See for example 132, 134 in Figure 4); and the diaphragm is arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See for example 132 in Figure 4). Thus, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to have one or more diaphragms be circular and be movable with a translatory component in the illuminating beam path in two directions perpendicular to the optical axis of the illuminating beam path; the illuminating device be movable relative to the one or more diaphragms; the diaphragm support be partially transmitting at least in subareas; and the diaphragm support be rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path, as taught by Penney et al., in the microscope of Horiguchi et al., to allow for proper optical alignment of the source and diaphragm in the optical path, while allowing for flexibility in adjusting the size of the aperture in the optical beam path.

16. Claims 25, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Penney et al.

Horiguchi et al. discloses the invention as set forth above in Claim 23, but does not specifically disclose the light patch being movable by pivoting of a deflection element for the illuminating light, and the diaphragm or deflection element being adjustable by motor. However, Penney et al. additionally discloses (See col. 10, lines 32-57) that the light source, as an alternative to directly moving the light source (See 12 in Figure 1) itself, may be fixed in position, and the light emitted from the source is reflected by a galvanometer mounted mirror whose orientation is controlled by the control system (See 80 in Figure 1), which provides a similar effect to moving the source with an X-Y stage. It is noted that such galvanometer mounted mirrors typically pivot about an axis, and that by moving the beam using such a mirror, the light patch will necessarily move. Further, Penney et al. discloses that the diaphragm position may be adjusted via a system

controller (See for example 80 in Figure 1) connected to a position drive system, such as an X-Y stage (See for example 36 in Figure 1). It is well known in the art that such conventional X-Y stages utilize motors to provide the movement needed for the stages. Official notice is taken. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the light patch be movable by pivoting of a deflection element for the illuminating light, and the diaphragm or deflection element be adjustable by motor, as taught by Penney et al., in the microscope of Horiguchi et al., to 1) allow for extremely fast, repetitive, and repeatable movement and scanning of the light beam from the light source, and 2) provide fast, automated movement of the stage without user intervention.

17. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiguchi et al. in view of Penney et al.

Horiguchi et al. discloses the invention as set forth above in Claim 23, but does not explicitly disclose the diaphragm having a modifiable slit width size or a modifiable circle diameter size. However, Penney et al. additionally teaches that the size of the aperture controls the size of the portion of the cornea which constitutes the measurement point, and that it is advantageous to utilize a smaller diameter aperture to prevent interference from the pupil of the eye, as well as block out unnecessary light form striking the cornea outside the measurement point (See col. 10, line 58-col. 11, line 25; col. 12, lines 48-57). Thus, one of ordinary skill in the art would have found it obvious to have the aperture include some means for adjusting its diameter, instead of utilizing a fixed-diameter aperture. Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to have the diaphragm of the operation microscope of Horiguchi et al., have a modifiable slit width size of a modifiable circle diameter size, as taught by Penney et al., for the purpose of optimizing the size of the measurement point, while preventing interference from unwanted stray light.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arnel C. Lavarias
Primary Examiner
Group Art Unit 2872
1/9/07

ARNEL LAVARIAS
PRIMARY PATENT EXAMINER